



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,102	05/16/2005	Takanori Yamazoe	843.45061X00	3570

7590 09/07/2006

Antonelli Terry Stout & Kraus
1300 North 17th Street
Suite 1800
Arlington, VA 22209

EXAMINER

COX, CASSANDRA F

ART UNIT	PAPER NUMBER
----------	--------------

2816

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/535,102

Applicant(s)

YAMAZOE ET AL

Examiner

Cassandra Cox

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-31 is/are allowed.
- 6) ☒ Claim(s) 20-27 and 32-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/16/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 20-27 and 32-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 20, 21, 37 and 38 are indefinite because the claims are misdescriptive. In particular the claims disclose the gate of the fourth MISFET/second connection circuit is connected to one end of the second capacitor configuring the basic charge pump cell at a preceding stage. This is not true of the first stage and appears to only apply to stages 2 through N. In one embodiment the gate of the fourth MISFET is connected to node n1

and in another embodiment the gate of the second connection circuit is coupled to a clock input. Correction or clarification is required.

Claim 32 is indefinite because it is not clear what the terms "plus or minus" refer to. Correction or clarification is required.

Claims 22-27 and 32-36 are rejected due to the limitations of the base claims and any intervening claims.

Allowable Subject Matter

4. Claims 28-31 are allowed.
5. Claims 37-38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
6. Claims 20-27 and 32-36 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
7. The following is a statement of reasons for the indication of allowable subject matter: Claims 20, 22-23, 26, and 32-36 would be allowable because the closest prior art of record fails to disclose a circuit as shown in Figure 6 wherein one end of the second capacitor is connected to a gate of the first MISFET (T1) and a second clock (2VCLKn), having a voltage amplitude larger than that of a sum of the operating voltage and a threshold voltage of the first MISFET (T1) and being a reversed phase to the first clock (CLK) is inputted to the other end thereof in combination with the rest of the limitations of the base claims and any intervening claims. Claims 21, 24, 25, and 27 would be allowable because the closest prior art of record fails to disclose a circuit as

shown in Figure 14 wherein one end of the second capacitor is connected to a gate of the first MISFET (T1) and a second clock (2VCLK), having a voltage amplitude larger than that of a sum of the operating voltage and a threshold voltage of the first MISFET (T1) and having a same phase to the first clock (CLK) is inputted to the other end thereof in combination with the rest of the limitations of the base claims and any intervening claims.

8. The following is an examiner's statement of reasons for allowance: Claims 28-29 are allowed because the closest prior art of record fails to disclose a circuit as shown in Figure 14 wherein a voltage (2VCLK) having a voltage amplitude larger than that of a sum of the operating voltage and a threshold voltage of the transfer MISFET (T1) is applied to the gate of the transfer MISFET (T1) in combination with the rest of the limitations of the base claims and any intervening claims. Claims 30-31 are allowed because the closest prior art of record fails to disclose a circuit as shown in Figure wherein a voltage (2VCLK) having a voltage amplitude larger than that of a sum of the operating voltage and a threshold voltage of the transfer MISFET is applied to the gate of the transfer MISFET in combination with the rest of the limitations of the base claims and any intervening claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cassandra Cox whose telephone number is 571-272-1741. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM and on alternate Fridays from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CC

September 2, 2006